

TRANSPORTATION SECTOR: MASS TRANSIT OPTION

◆ TENNESSEE

Electric Shuttle Bus for Climate-Smart Commuting

The Chattanooga Area Regional Transit Authority (CARTA) has established a park and ride system of transportation for city commuters. Commuters drive to one of two large parking garages just outside of Chattanooga where they can park and catch an electric shuttle bus to take them downtown. The efficient electric shuttle bus connects one end of the downtown area to the other, providing transportation to the downtown area and within the downtown area without the hassle of moving and re-parking one's car. Approximately 762,900 people use the shuttle service annually. As a result of the shuttle bus option, 65% of the downtown land once reserved for parking is now opened up for development, providing a source of revenue for the city.



Furthermore, the shuttle service is free of charge, providing a huge incentive to use mass transit. Ninety percent of CARTA's initial costs for parking facilities and shuttle buses were paid for by grants from the Federal Transportation Administration and the Tennessee Department of Transportation. Future operating costs (about \$500,000 per year) will be covered through parking fees and the lease of retail space at parking facilities.

Results:

CARTA's fleet of 15 electric buses has already improved the air quality and traffic congestion within the city.

CARTA's bus system reduces single occupancy vehicle use and is responsible for annual emission reductions of approximately 600 lbs. particulate matter (0.27 MT*), 2,900 lbs. carbon

monoxide (1.3 MT*), 10,800 lbs. NOx (4.9 MT*), and 3,500,000 lbs. CO₂ (434 MTCE**). Furthermore, the city will obtain monetary benefits of approximately \$12 million from the sale of the no longer used parking lots and about \$800,000 in city and county taxes generated by these new businesses.

Criteria Pollutant Emission Reductions	Cost Benefits	Greenhouse Gas Reductions
0.27 MT* particulates 1.3 MT* CO 4.9 MT* NOx	\$12.8 million (in new development)	434 MTCE**

Principal Actors:

City of Chattanooga (the project stemmed from a request by Mayor Gene Roberts), Chattanooga Area Regional Transit Authority (CARTA), the Federal Transportation Administration, and the Tennessee Department of Transportation.

Additional Information:

Chattanooga Area Regional Transit Authority, (423) 629-1411; John Powell, Electric Transit Vehicle Institute (ETVI), (423) 622-3884, etvi@vol.com.

This case study is based on information found in Smart Investments for City and County Managers and "Chattanooga's Electric Vehicle Initiative" at <http://chattanooga-chamber.com/submains/newsbur/stories/busnew.html>.

* Original data have been converted from pounds of pollutant to metric tons (MT).

** Original data have been converted from pounds of CO₂ to Metric Tons of Carbon Equivalent (MTCE).